

CHINESE GOVERNMENT RAILWAYS

PEKING-MUKDEN LINE.

Report for the Year ended 30th June, 1914,

Published for circulation by order of the Directors.

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CHINESE GOVERNMENT RAILWAYS
PEKING-MUKDEN LINE
ADMINISTRATION BUILDING, TIENTSIN

CHINESE GOVERNMENT RAILWAYS

PEKING-MUKDEN LINE.

General Report

For the Year ending 30th June, 1914.

The Directors submit the following report of the main features of the working of the railway during the 12 months ending 30th June, 1914. The previous report only covered a period of 6 months to 30th June, 1913. The following summary has been compiled to show the results of 12 months working in each case.

	For 12 months ending 30th June	
	1913	1914
	\$	\$
Earnings	14,907,232.87	13,841,991.91
Working Expenses	3,925,450.56	5,024,049.04
Balance after paying Working Expenses	10,981,782.31	8,817,942.87
Ratio of Working Expenses to Earnings	27 %	36 %

Mileage.—The mileage open to traffic is 605.76 miles.

Loans.—On 1st August, 1913 the Ninth Drawing of the Chinese Government Railways 5% Gold Loan of 1899 amounting to £57,500 was paid off thus reducing the amount outstanding to £1,782,500.

The Gold Loan from the South Manchuria Railway has also been reduced according to schedule.

Exchange.—The Loan service obligations due in London were met by monthly remittances during the year at an average rate of exchange of $2/9 \frac{3}{8}$ per Tientsin Tael.

Li Tsoi-Chee

Managing Director.

Chu Kin-How

Associate Director.

CHINESE GOVERNMENT RAILWAYS. PEKING-MUKDEN LINE.

STATEMENT OF ACCOUNTS FOR THE YEAR ENDED 30th JUNE, 1914.

No. 1

Capital Authorised and Created

DETAILS	Capital Authorised			Capital Created			Balance		
	Stock and Shares	Loans	Total	Stock and Shares	Loans	Total	Stock and Shares	Loans	Total
Chinese Government and Chinese Shareholders. }	\$ 21,994,428.57	\$ —	\$ 21,994,428.57	\$ 21,994,428.57	\$ —	\$ 21,994,428.57	\$	\$	\$
Under Loan Agreement 1899, £ 2,300,000 . . }	—	27,600,000.00	27,600,000.00	—	27,600,000.00	27,600,000.00			
Under Japanese Loan Agreements, South Manchuria Rly. Loan, 1909. Gold Yen 320,000. . . }	—	377,142.86	377,142.86	—	377,142.86	377,142.86			
\$	21,994,428.57	27,977,142.86	49,971,571.43	21,994,428.57	27,977,142.86	49,971,571.43			

No. 2

Stock and Share Capital Created Showing Proportion Issued.

	Amount Created	Amount Issued	Amount Unissued
Chinese Government and Chinese Shareholders	\$ 21,994,428.57	\$ 21,994,428.57	—
\$	21,994,428.57	21,994,428.57	—

No. 3

Capital Raised by Debenture Stock.

Chinese Government Peking-Mukden Railway 5% Loan, formerly called Imperial Chinese 5% Railway Loan, 1899 (original amount of Loan £ 2,300,000).		\$
Existing at 30th June, 1913.	£ 1,840,000	22,080,000
Bonds of Ninth Drawing paid off	57,500	690,000
Existing at 30th June, 1914	£ 1,782,500	21,390,000
South Manchuria Railway Loan, 1909 (original amount of Loan G. Yen 320,000.00).		
Existing at 30th June, 1914	G. Yen 240,000.03	

No. 4

Receipts and Expenditure on Capital Account.

Dr.

Cr.

	Total to 30th June 1913	During Year to 30th June 1914	Total to 30th June 1914		Total to 30th June 1913	During Year to 30th June 1914	Total to 30th June 1914
To Expenditure	\$	\$	\$	By Receipts	\$	\$	\$
Lines open for Traffic	49,635,095.65	—	49,635,095.65	Shares	21,994,428.57	—	21,994,428.57
Steamer.	336,475.78	—	336,475.78	Debenture Stock	27,600,000.00	—	27,600,000.00
\$	49,971,571.43	—	49,971,571.43	South Manchuria Rly. Loan	377,142.86	—	377,142.86
Balance			Nil				
		\$ 49,971,571.43					\$ 49,971,571.43

No. 5

Details of Expenditure on Capital Account.

No. 6

Expenditure on Capital Works paid for from Revenue.

Betterments.												
Additions to Mukden Extensions	.	.	.	.	.	.	.	.	.	.	.	79,459.57
Rolling Stock	.	.	.	.	.	.	.	.	.	.	.	1,182,594.09
Tongshan Works	.	.	.	.	.	.	.	.	.	.	.	128,615.06
Locomotive Sheds	.	.	.	.	.	.	.	.	.	.	.	17,504.50
Loco. Water Towers etc.	.	.	.	.	.	.	.	.	.	.	.	38,203.16
Bridge Works	.	.	.	.	.	.	.	.	.	.	.	7,463.72
New Stations	.	.	.	.	.	.	.	.	.	.	.	30,209.32
Additions to Stations	.	.	.	.	.	.	.	.	.	.	.	71,088.16
Fencing Stations	.	.	.	.	.	.	.	.	.	.	.	9,889.01
Baggage Rooms	.	.	.	.	.	.	.	.	.	.	.	5,861.15
Sidings	.	.	.	.	.	.	.	.	.	.	.	26,575.77
Land	.	.	.	.	.	.	.	.	.	.	.	32,026.74
Additions to other Buildings	.	.	.	.	.	.	.	.	.	.	.	25,597.10
Staff Quarters	.	.	.	.	.	.	.	.	.	.	.	22,345.93
Miscellaneous	.	.	.	.	.	.	.	.	.	.	.	23,828.35
Expended during current year												1,701,261.63
Expended in previous years												9,764,590.10
												\$ 11,465,851.73

No. 7

Revenue Account

Dr.

Cr.

To Maintenance of Way, Works and Stations as per Abstract A . . .	1,154,739.52		
„ Locomotive, Carriage and Wagon Expenses as per Abstract B. . .	2,390,960.96		
„ Traffic Expenses as per Abstract D.	622,794.92		
„ General Charges „ „ E.	855,553.64	5,024,049.04	
„ Balance carried to Net Revenue Account. . .	8,817,942.87		
\$	13,841,991.91		

By Earnings :		
Passenger Service	5,808,217.35	
Goods Service	7,159,071.00	
Miscellaneous Receipts	303,621.46	
Chinese Government Traffic	269,072.98	
	13,539,982.85	
Railway Service	302,009.06	
\$	13,841,991.91	

No. 8

Net Revenue Account

Dr.

Cr.

		Cr.	
To Debuture Loan, Ninth instalment repaid	690,000.00	By Balance forward from last year..	6,217,609.48
" " " Interest.	918,617.37	" Balance transferred from Revenue Account	8,817,942.87
" Chinese Shares, Interest.	8,150.60		
" S.M.R. Loan, part capital repaid	18,523.80		
" " " " Interest,	13,193.25		
" Paid to Chinese Government.	5,061,913.25		
" Shipping Department.	27,828.71		
" Tongshan College, Upkeep	75,600.00		
" Bonus to Employees	212,703.58		
" Betterments, being amount taken from Revenue for Capital Works.	1,701,261.63		
" Balance	6,307,760.16		
\$	15,035,552.35		
		\$	15,035,552.35

No. 9

General Balance Sheet

Dr.

Capital Account, Balance per No. 4	NIL	Hongkong and Shanghai Bank, London	
Salaries and Wages due	250,885.41	Revenue Funds, on Current Ac-	
Sundry Creditors.	261,743.68	count "A"	£ 23,805.55
B.R.A. Balance taken over	3,293,107.44	To meet repayment of Loan Capital	
Net Revenue A/c, Balance at Credit per No. 8	6,307,760.16	Hongkong and Shanghai Bank, China	
		On Deposit Receipt	\$ 1,645,714.29
		On Current Account	875,390.19
		Cash on hand in Head Office	2,521,104.48
		Stores	250,117.15
		Investments	3,728,514.28
		Traffic Accounts due to the Railway	1,272,146.24
		Other Accounts due to the Railway.	623,015.91
		Accounts due by other Railways	550,317.20
			340,584.21
\$ 10,113,496.69		\$ 10,113,496.69	

Wm. Henderson, C.A.,

Chief Accountant

ABSTRACTS.

A. Maintenance of Way, Works and Stations.

Year ending 30th June, 1913			Year ending 30th June, 1914	
	172,594.09	Salaries, Office Expenses and General Superintendence		193,036.11
		Maintenance and Renewal of Permanent Way :—		
334,086.20		Wages	324,939.31	
349,087.74	683,173.94	Materials	355,580.48	680,519.79
		Repairs of Bridges.		
11,422.55		Wages	10,726.59	
23,440.99	34,863.54	Materials	17,848.49	28,575.08
		Repairs of Stations and Buildings.		
	116,991.23	Service Freight		126,061.28
	Nil			126,547.26
\$	1,007,622.80		\$	1,154,739.52

B. & C. Locomotive Power and Rolling Stock Repairs.

Year ending 30th June, 1913.			Year ending 30th June, 1914.	
	165,812.19	Salaries, Office Expenses and General Superintendence		174,228.48
		Running Expenses		
169,720.26		Wages connected with working Locomotive Engines	189,111.34	
533,341.81		Coal	573,254.73	
58,458.61		Water	76,582.96	
81,185.51	842,706.19	Oil, Tallow and other Stores	90,182.83	929,131.86
		Maintenance and Renewal of Locomotives and Machinery :—		
336,578.41		Wages	316,036.97	
153,364.16	489,942.57	Materials	226,697.25	542,734.22
		Repairs and Renewals of Cars :—		
		COACHING VEHICLES.		
99,481.53		Wages	88,901.60	
86,320.08	185,801.61	Materials	160,733.56	249,635.16
		GOODS VEHICLES :		
94,578.18		Wages	90,141.67	
82,673.53	177,251.71	Materials	141,355.82	231,497.49
	49,390.88	Cleaning Carriages and Oiling		55,341.56
	11,340.11	Steam Ferry at Newchwang		13,745.50
	Nil	Service Freight		194,646.69
\$	1,922,245.26		\$	2,390,960.96

D. Traffic Expenses.

Year ending 30th June, 1913			Year ending 30th June, 1914	
\$	\$		\$	\$
103,888.43		General Superintendence	110,768.40	
264,576.11		Wages of Station Staff	305,098.90	
76,091.20		Wages of Train Staff	94,451.09	
78,889.92		Lighting and Small Stores	91,030.39	
43.29		Wagon Covers, Ropes, etc.	Nil	
10,346.09		Station Fittings and Furniture	20,323.87	
Nil		Service Freight	1,122.27	
	533,835.04			622,784.92

E. General Charges.

Year ending 30th June, 1913			Year ending 30th June, 1914	
\$	\$		\$	\$
251,728.98		General Superintendence	237,502.79	
72,947.38		Accountant's Department	77,996.94	
81,033.06		Stores Department	83,105.81	
47,433.03		Medical Department	52,921.63	
4,924.07		Rents of Buildings and Lands	4,241.51	
100,585.93		Police	166,961.80	
165,227.79		Telegraph Department	179,182.93	
90,338.63		Stationery and Printing	111,229.54	
3,253.63		Compensation	5,458.15	
57,593.19		Sundries	57,332.63	
Nil		Service Freight	49,535.69	
875,065.69		Interest, &c.	1,025,469.42	
Cr.413,318.23			Cr.169,915.78	
	461,747.46			855,553.64

EARNINGS.

Year ending 30th June, 1913			Year ending 30th June, 1914	
\$	\$		\$	\$
5,632,530.76		Passenger Service	5,808,217.35	
8,043,563.05		Goods Service	7,159,071.06	
494,195.01		Miscellaneous Receipts	303,621.46	
736,944.05		Chinese Government Traffic	269,072.98	
Nil		Railway Service	302,009.06	
	14,907,232.87			13,841,991.91

AUDITOR'S CERTIFICATE

The accounts for the year ended 30th June, 1914, as stated, contain, in my opinion, a full and true statement of the financial condition of the Railway, and the revenue has, in my judgment, been charged with all expenses which ought to be paid thereout. The interest and redemption of the Loans during the year have been fully met.

Tientsin, 28th August, 1914.

A. F. Algie,
Auditor

ENGINEER-IN-CHIEF'S CERTIFICATE.

I hereby certify that the Permanent Way, Bridges, Stations and other Buildings have been maintained in good order during the Year ending 30th June, 1914.

Tientsin, 18th August, 1914.

D. Poyntz Ricketts,
Engineer-in-Chief.

LOCOMOTIVE SUPERINTENDENT'S CERTIFICATE.

I hereby certify that the Plant, Locomotives, Coaches, Cars, Wagons, Machinery and Tools have been maintained in good order and repair during the year ending 30th June, 1914.

Tongshan, 20th August, 1914.

F. A. Jamieson,
Loco. & Works Superintendent.

REPORT ON PERMANENT WAY DEPARTMENT

FOR TWELVE MONTHS ENDING 30th JUNE 1914.

Miles of Main Line Track	605.760	miles
Miles of Sidings, permanent	159.493	
temporary	8.512	Total 168.005 "
Increase of Sidings, permanent	1.960	
temporary	2.026	Total increase 3.980 "
New sleepers put in for maintenance		
(a) 8 ft. Sleepers	225,601	
(b) Crossing timbers	2,542	
Rails changed		
23. 85 lbs	broken or defective	
1. 70 lbs	" " "	
22. New section 60 lbs	" " "	
15. Old section 60	" " "	
1,444 ft. O/S 60 lbs track relaid with 85 lb.		
3,120 ft. Jap. 60 lb.	" " " New section 60 lb.	
Fangs of ballast used for maintenance	13,113.	
Fangs of ballast used for new work	3,119.	
Floor ties renewed.	5,213.	

Probable renewals for next year.

(a) 8 ft. sleepers	245,000.
(b) Crossing timbers	8,000.
(c) Floor ties	7,300.

New bridges completed:—

Bridge No. 188 (S. C. H.) extended 3 spans 10 ft. each.	
Fangs of rubble used for protective work	3,935.
Probable extra bridge work, etc., necessary to cope with floods:—	
Strengthening Liu Ho dams.	
Fangs of earthwork executed.	
(a) For new work	19,379.
(b) For repairs	20,407

Platforms extended.

13 Stations' platforms to the extent of	ft. 6,071
---	-----------

New Buildings erected.

W. C. Station building	sq. ft. 1,016
T. C. S. Tsinpu quarters	" 1,196
T. C. S. Post office quarters	" 1,740
T. S. Extension of Station Buildings	" 4,920
H. H. Store-yard, Coolies & Police Quarters	" 1,782
H. K. C. Traffic Quarters	" 1,140
T. N. Pattern Shop	" 2,624
" Extension of Electric Store	" 2,392
" Smith Shop	" 4,114
" Extension of Store	" 2,473
" Inspection pit	" 1,057
" Steel Bogie Shop	" 4,564
" Casting Store	" 1,701
L. A. U. S. A. Barracks	" 4,917
T. T. U. New Station	" 1,468
H. F. T. do do	" 1,468
C. K. C. do do	" 1,468
T. H. Waiting Room	" 1,200
S. H. K. B. W. Girder Shop extension	" 3,156
" Chinese Government Telegraph Office	" 1,470
C. C. H. New Loco Quarters	" 5,526
K. P. T. Police Quarters	" 2,693
Y. C. T. Station buildings	" 1,190
Y. K. Station extra baggage room & P. O.	" 1,074
H. K. T. Additional Loco. Staff Quarters	" 4,067
Numerous small buildings to the extent	" 31,859

Total sq. ft. 91,859

Signals erected.

T. T. U. Up and down home and distant	4
H. F. T. " " " " " " " "	4
C. K. C. " " " " " " " "	4

Heavy works executed.

Yang-tsun to Chang-chuang. Two miles of bank reformed to slope of 2 to 1 and roughly hand pitched.
Tientsin East, New booking-hall, ticket office, baggage room & Customs office added.
Totzuto, Houfengtai & Changchiachuang, crossing station put in.
Tang-shan, about 20,000, sq. ft. of new buildings built for the workshops.
Hsinminfu. 3,952 ft. of yard wall built as protection against floods.

Foreshore protection.

83 fangs of rubble used at Ying-kow.

Wharfage built.

4 casting iron bollards set in re-inforced concrete and 6 new piles 55 ft. long driven at Ying-kow wharf.

Painting executed for maintenance.

94 bridges
2 footbridges
Tanks, turntables, buildings, notice-boards, signals, etc.

Water supply works.

Chien-men. City water laid on to tank in loco. yard.
Feng-tai. New well sunk & 15 ft. tank with crane erected at east end of station.
Chang-chuang. New well put down for domestic supply.
Tientsin. City water laid on to Inspector's quarters, 780 ft. 2" main to waiting room renewed.
Lu-tai. Water crane erected at east end & connected to tank by 132 ft. of 8" pipe.
Tang-shan. Three bore holes sunk, but unsuccessful. Two wells 6 ft. & 9 ft. dia. respectively are being sunk and are now down 40 ft.
An-shan. A new 20 ft. tank with steam pump has been put in at east end.
Chien-wei. A new 20 ft. tank & 15 ft. dia. well put in.
Ningyuanchow. A new well 12 ft. dia. has been put down.
Lichiawopu. " " " 15 ft. " " " " "
Peichipu. New well put down for domestic supply.

Works in progress.

F. T. Re-arrangement of yard & signalling.
" Water tank for Kalgan & Kihhan lines.
L. G. Water tank and stand pipe.
L. F. Station building.
P. G. " "
T. C. S. Post Office.
" Station building extension.
" Extension of Tsin-pu quarters.
" Water tank & stand pipe.
T. S. Dump siding & filling.
" Goods shed.
H. K. Salt siding.
L. T. Water crane.
" Weighbridge.
T. W. Extend smith shop.
" Pressed steel bogie shop.
" Store for castings.
" Extend East boiler house.
" Draftsman's quarters.
" Sink wells.
Bet. T. N. & K. P. Strengthen bridge 36
K. Y. Lengthening platforms.
L. A. " "
L. S. Y. " "
L. C. Extra sidings accommodation.
T. H. Car repair sidings & workshop.

S. H. K. Loco Staff quarters repairs.
" Chinese Government Telegraph Office.
" Loco Inspector's quarters.
" Bridge works Office for Chinese.
N. Y. C. New water tank &c.
" New baggage room & alterations to Stn. buildings.
K. P. T. Engineer Department quarters.
" Bore holes.
" Signalling.
K. S. T. Quarry clerk's quarters.
" Roads, Latrines.
C. L. H. Strengthening Liu Ho dams.
P. C. P. Station Master's house.
Y. K. Latrines.

Accidents during the year

Employees killed	8	Injured	7
Passengers " "	4	Injured	3
Trespassers " "	30	Injured	16
Animals " "	5	Injured	0
Engine & car derailments in yards			91
Collisions while shunting in yards			6
Trains separated			7
Car on fire			4
Minor accidents			62

Rainfall & floods.

On August 4th 1913 the Pei Ho broke its right bank above railway and flooded Tung-chow river station buildings, and put a severe strain on capacity of bridges Nos. 8 & 9 on the Tung-chow Branch. The scour at the latter bridge was very considerable but was checked by rubble.
Rainfall outside the wall was abnormally small in 1913.

The average for year ending 30-6-14 was

Inside wall	18.54 inches
Outside wall	12.65 "

Average number of employees. 4,967.

LOCOMOTIVE DEPARTMENT

Annual Report of work carried out by the Locomotive and Carriage Works.
FROM JULY 1st 1913 TO JUNE 30th 1914.

Locomotives.

Repairs	CLASS															Total
	1	11	15	23	40	44	47	54	58	74	100	101	107	125		
General overhaul T. N	2		1		2				1	8		5	4	5		28
Repairs K. P. E. Shops		2	2						4	5						13
New fire boxes																8
Half sides																12
Tube plate Fire box																12
smoke box																1
Back plate fire box																9
Sets of Tubes																25
Smoke box																1
New boilers completed	1		3						2	4					2	12
New „ under construction . .									7	5						12
Boilers withdrawn																10
Painted	2		1		2				1	9		2	5	5		27
Improvements																
Fitted with W. A. Brake										6						6
„ train heating						2				6						8

Tenders.

Description	Class			Total
	4 wheel	6 wheel	8 wheel bogie	
General overhaul T. N	1	12	13	26
Repaired K. P. T. Shops			14	14
Painted		10	17	27

Coaches and Wagons.

General Repairs	Coaches	Wagons	Brake Vans etc.
Tongshan Works	105	989	32
Kao-Pan-Tze Shops	63	921	25
Running sheds effected 16,634 repairs and the axle boxes of 27,783 cars were repaired.			

Coaching Stock

Electrical Equipment of Coaches and Vans overhauled	45
do rewired	4
Painted and Varnished	86
Brake Van Boilers for train heating in hand	11
3rd class coaches rebuilt with standard teak Bodies	3
3rd class Coaches fitted with kitchen	6

Freight Stock

Electrical Equipment of freight wagons overhauled	3
Painted	930
Rebuilt	88
30 Ton H. S. wagons 6'-0" Steel Doors altered to 4' 4½"	13
20 " L. S. wagons falling stanchions fitted	20

Conversion

Coaching Stock.

Kitchen car 117 converted to Postal van and renumbered 80
" " 172 " " 30 Ton Covered Goods renumbered 2,854

Freight Stock.

12 Ton Pony Wagon No. 11 converted to 20 ton H. S. & renumbered 1,584
30 Ton Covd. Goods 1,089 " " Wrecking car " " 10

Improvements to Rolling Stock.

	Westinghouse				Electric lighting		
	Air Brake	Heating complete	Brake pipe	Heater pipe	Stones system	Direct from dynamo vans	
Coaches							
1st	4	14			6		
2nd	5	8			1		
3rd	4	6				4	
Compos.	5						
Private car					1		
B. & B. Vans					1		
Freights							
Pony wagons			1				
30-ton Covd. Goods.			10	10			
	18	28	11	10	9	4	

CONSTRUCTIONAL WORKS FOR FOREIGN LINES & OTHERS

New Rolling Stock &c. Completed

Tao-Ching Line	
30-ton High Side wagons, Wheels, Axles, and Bogie	
Frames of old cars used	90
Kalgan Line.	
30-ton High side Wagons	70
22' Brake Vans	5
Loco Boiler for 19" Mogul class	1
Steel fire box 19" " "	1
Kirin Line	
30-ton High Side Wagons	20
22' Brake vans	4
Baggage Postal and Guards van	1
Asiatic Petroleum Co. Ltd.	
30-ton Oil tank wagons	7

New Rolling Stock &c. under Construction.

Kalgan Line	
30-ton Covered Goods Wagons	50
10-ton Coal Wagons	10
Kirin Line	
30-ton High Side Wagons	15
" Covered Goods	30
" Flat wagons	5
15-ton High Side wagons	20
Loco boilers for 17" mogul class	3
Standard Oil Co. Ltd.	
30-ton Oil tank wagons	3

New Rolling Stock for P. M. Line Under Construction.

Coaches	
First Class	
Sleepers	2
Buffet	2
Second Class	1
Third "	27
Brake Vans	
23' frame	10
42' "	2
55' "	4

Freight	30-ton High Side	185
	" Covered Goods	75
	20-ton High Side	7
	Pig Cars	3

Locomotives	
19" Moguls	12
17" "	1
17" Shunters 54 class	2

Tenders.	
Eight wheel Bogie.	12

New Rolling Stock for P. M. Line Completed.

Coaches. First Class	
Drawing Room Car	1
Corridor cars	5
Sleeping car	1
Kitchen car	1
Private cars	5
Second Class	
Day coaches	5
Buffet and Kitchen car	1

Freights.	
30-ton High Side	30
" Low side	50
20-ton High Side (All Steel)	1
20-ton " (Timber bodies)	68

Miscellaneous.	
12-ton Oil tank car for Store use	1
Ash trucks (for Works use)	20

Locomotives.	
Shunters Type 2-6-2 Cylinders 14" x 20" Drivers 3' 6"	3
" erected (Imported) Type 2-6-2 Cyl: 17" x 24" Drivers 4' 6"	1
Freight Type 2-6-0 Cylinders 19" x 24" Drivers 5'	5

Tenders.	
Eight wheel Bogie tenders	4

NEW MACHINERY ERECTED. Tongshan Central Works.

Machinery Imported.

3. Babcock & Wilcox boilers each 983 sq. ft. H. S. and feed pump.
1. Lancashire Boiler 30' 0" x 7' 0" diameter.
1. Set Duplex direct acting pumping engines 16" x 12" Rams $2\frac{1}{4}$ "
1. Piston and Valve rod grinding machine to work 6" diam x 5' 3" long.
1. Swinging grinding machine for polishing connecting & side rods.
2. Sundale Improved water tool grinders.
1. Handy Emery band grinder.
1. Motor driven boiler scaling tool.
1. John's Motor driven Splitting shears to shear $\frac{3}{4}$ " plate 16" Punching gap and notching apparatus.
1. John's Splitting shears combined with punching machine and bar angle and tee cropper.
1. Lever shearing machine Size No. 3.
1. Plate edge milling machine.
1. Cylinder port milling machine.
1. Brass Finishers milling machine.
2. H. S. Drilling machines to drill up to 1" diam.
6. S. S. Self Acting lathes $6\frac{1}{2}$ " centres.
1. Rivet & Bolt Making machine to make up to 1" diam x 6" fitted with engine.
1. Friction Feed Cross cut saw bench Type M. T. 5' 0" x 2' 6".
1. Multiple Headed H. S. Automatic Bolt Screwing Machine.
1. Planing Machine 12' 0" x 4' 6" x 4' 0".
3. 30 H. P. motors.
1. Alekin Distilling plant, 7 gallon per hour capacity.
1. Testing set for Stones Electric light.

Machinery Manufactured at Tongshan Works.

1. Turntable for Loco. Works Boiler Shop.
3. Turntable for Pressed Steel Bogie shop.
1. Set New Levelling Blocks.
1. 10 cwt Steam hammer.
2. Journal polishing lathes for T. S. & T. K. sheds.
1. "Woods" steaming apparatus for arch rails.
2. Wall Cranes.

Machinery Manufactured S. H. K. Bridge Works.

1. Standard wash out pump for T. W. main pump house.

New Machinery for sheds.

1. Cornish boiler 18' 0" x 5' 0" for C. M.
4. Vertical boilers erected in new boiler house C. C. H. shed.
1. Combined Electric light set for C. M.
1. "Sturvetant" heater fan & piping fitted in M. D. Shed.

Foundry Output.

	1912-13	1913-14
Iron Castings	627.2 Tons	1194.2 tons
Brass	109.9 "	109.5 "

Average number of Employees.

	1913	1914
Tongshan Works (Exclusive of contractors men 1,092 Approx. average).	2512	2184
Kao-Pan-Tze Shops	341	354
Loco Sheds (Running Dept.)	1716	1761

Rolling Stock Withdrawn.

	Wrecked on Home Line	Wrecked on Foreign Lines	
	Train wreck H. F. T.	Kunhan Railway	T. P. Railway. N. S. Civil War A/C.
12 Ton Coal wagons	2		
20 " High Side	2	1	1
20 " Low side		2	
24 " High side	2		
30-ton High side	3		
Locomotive (16" x 24" Mogul)	1		

Rolling Stock Equipment at 30th June 1914.

	No. of Vehicles	Tonnage	Axles
10-ton 4 wheel Explosive	6	60	12
Coal cars	264	2640	528
Water tank.	7	70	14
Pig Cars	7	70	14
12-ton Coal cars	466	5592	932
Oil Tank	1	12	2
Pony cars	33	396	132
20-ton Low Side	246	4920	984
Flat Cars	72	1440	288
High Side	871	17420	3484
Covered Goods	96	1920	384
24-ton High Side	154	3696	616
Low Side	16	384	64
Flat	1	24	4
30-ton Covered Goods	163	4890	652
Water tanks	3	90	12
Oil tanks	49	1470	196
Low Side	88	2640	352
High Side	485	14550	1940
Logging	2	60	8
Break down vans.	10	210	40
Total Cars	3040	62554	10658
State Cars	6		24
Directors' car	1		4
Private & Service	18		56
1st class	32		128
2nd class	42		168
3rd class	103		412
Composite	17		68
Buffet	7		28
Postal Vans.	5		20
Train-de-Luxe Equipment.			
1st class Dining.	3		12
2nd class Dining.	3		12
1st class Sleeping	6		24
2nd class Sleeping	3		12
1st class Saloon	3		12
2nd class Saloon	2		8
Heating & Lighting	4		16
Baggage & Brake Vans.	5		20
Brake Vans			
4 wheel	49		98
8 wheel	15		60
Note. Register corrected by removal of 148 freight wagons.	324		1182

Locomotives.

Passenger.

4-4-0	Cylinder	17" x 24"	4	
4-4-0	"	19" x 24"	3	
4-6-0	"	18" x 24"	13	20

Freight.

2-6-0	"	17" x 24"	43	
2-6-0	"	19" x 24"	20	
2-6-0	"	16" x 24"	26	89

Shunters.

2-6-2	"	14" x 20"	16	
0-6-0	"	16" x 24"	4	
2-6-4	"	17" x 24"	3	23
Total			132	

Tenders.

4 Wheel	3
8 Wheel	67
6 Wheel	26
Total	116

Comparative Table of Rolling Stock.

	1913	1914
Passenger coaches and Brake Vans	306	324
No. of axles	1114	1182
Freight cars of all classes	2941	3040
Tonnage capacity	59711	62554
Locomotives of all classes	124	132
Weight in tons	5649	6087.19

Bridge Works Shanhaikwan

Annual Report from July 1st 1913 to June 30th 1914.

The tonnage of work turned out was as follows:—

		Tons	783.	16.	0.	4.
Girders.	20 spans 100 ft. clear girders		45.	0.	3.	10.
	3 " 45 " " " (Defferdange)		32.	5.	1.	8.
	10 " 20 " " " (For 50 lever Signal frame)		1.	8.	2.	19.
	1 " 34 " " " (For 34 lever Signal frame)		19.	2.	8.	
	1 " 26'-6" " " (For 30 lever Signal frame)		18.	2.	8.	
	1 " 25'-6" " " (For Water tank)		2.	18.	1.	22.
	2 " 20'-3" " " (do.)		2.	8.	1.	0.
	4 " 17'-0" " " (do.)		4.	7.	1.	11.
		Tons	874.	3.	0.	6.

Special work, Tanks etc.

3	20 ft. dia. x 12 ft. Water tanks	Tons	21.	1.	1.	7.
1	15 " " " 12 " " "		5.	6.	3.	9.
2	9 " " " 9 " " "		5.	18.	2.	18.
1	8'-9" " " 8' " " "		1.	19.	0.	0.
1	8'-8" " " 8' " " "		1.	18.	0.	0.
1	8'-10" " " 6' " " "		1.	10.	0.	0.
1	5 ft. " " 8 exhaust steam tank		1.	1.	3.	21.
1	Casting pit tank 14' dia. x 8 ft.		3.	0.	0.	8.
4	4' x 4' x 4' Oil tanks (For K. P. E. W/S.)		1.	15.	2.	27.
4	4' x 2' x 4' " " (do.)		1.	4.	3.	23.
29	sets Roof Trusses 42 ft. clear for T. N.		18.	8.	2.	5.
3	12" dia. x 36' long 1/2 steel plate chimney (For K. P. E. W/S.)		1.	0.	2.	4.
3	Iron Racks for B. W. Iron Codown		32.	7.	0.	7.
		Tons	96.	12.	2.	17.

Miscellaneous Iron Works.

To the extent of	Tons	69.	3.	0.	0.
Total Tonnage of Iron work done	Tons	1,039.	18.	2.	23.

Points, Crossings etc.

During the year 19 sets points and crossings complete and 80 Double and singal armed singal posts, fittings, ladders and tripods were manufactured and delivered.

Foundry.

The Foundry has been fully employed upon castings for Points, Crossing, Signal gears Washout & Centrifugal pumps, Crane & Stand pipes, Railway Chairs, Signal frames and miscellaneous Castings for maintenance & Construction.

Iron casting to the extent of	Tons.	249.	16.	1.	20.
Brase castings to the extent of	Tons.	3.	2.	3.	22.
Total Tons.		252.	19.	1.	14.

Average Number of Employees.

The average daily labour employed including Sundays, Holidays and staff amounts to 430.

GENERAL NOTES.

Locomotives Department.

A heavy shunting engine has been obtained from the North British Locomotive Company of a type which it is hoped to make standard for the line, the present shunters being too light for the work they are called on to perform went into service and has given every satisfaction. Two similar engines are to be built at Tongshan Works. Two of the five standard Mogul engines built here were fitted with Phoenix superheaters which have worked as satisfactory as was expected of a smoke box superheater during the short time they have been in service. The reboiling of the older classes of engines continues.

The accommodation for second and third class Passengers has been greatly improved. The new second class being provided with wire woven seats covered with rattan, equipped with Stones system of electric light and steam heated. The new third class coaches are now built with standard passenger coach bodies, except that loading and unloading takes place from big side doors. They are fitted with battened seats round the sides and down centre and wide baggage racks. All have a special women's compartment and are steam heated. A few have been given small kitchens. Several of the old type third class are being rebuilt to this design. The first 'all steel' thirty ton coal cars have gone into service and becomes the standard of this type on this Railway. All freight bogie stock and passenger coaches built during the year and now building are fitted with pressed steel bogies manufactured at Tongshan Works.

During the Spring the want of a sufficient water supply for Tongshan Works gave considerable trouble and machine shops were frequently shut down. The sinking of two new wells, the deepening of the existing main well and the provision of another pumping station were put into the hands of the Kailan Mining Administration who are now engaged on the work. A 7" water main has been laid between the Car Works tower, Loco. Works tower and running shed stand pipe. The hydraulic water pressure mains between the power house and boiler shops were renewed. A duplicate electric light combined set and another boiler were installed at Chien-men power house. The car shed at Mukden was piped for steam heating.

So great was the demand for rolling stock that it was difficult at times to get sufficient stock passed through the works to maintain it in the required state of repair.

The work undertaken in these Works has developed considerably during the last few years without increase in staff. The extra pressure of work has been much felt by the existing executive staff, especially in the Store Department. Further expert foreign assistance is required here and in some of the shops.

To meet the growing trade of this Railway and especially the coal traffic between Tongshan and Tongho the following addition to rolling stock and more important improvements to track and stations is recommended:

Locomotives.	5	Consolidation type Locos.	13 tons on drivers.
	4	Mikado type Locos.	16 tons on drivers.
	3	4-6-0 type Locos.	17 tons on drivers.

Cars.	200	30-ton H. S. coal cars.
	100	30-ton covered Goods.

Tongshan Shops.	Extension to Car Works.
	Extension to Store Buildings.
	New machinery.

Permanent Way. General Improvements.

- M. D. New station close to city with large station building, quarters, platforms, etc.
M. D. to S. H. K. All platforms to be lengthened to 600 ft.
Y. K. to K. P. T. " " " " " " 400 "
L. C. W. P. New Station building and filling borrow pits in Goods yard.
Y. K. Build out the East end of wharf into deep water, so as to make the whole wharf available for steamers. At present at low tide the depth of water at east end is only a few feet.
S. S. N. New station building and small extensions of sidings.
S. H. K. The quarters and telegraph office at east end of station building to be pulled down, and those at west end to be rebuilt as offices etc., for telegraph and station staff.
Down platform to be widened and a back passenger-train bay put in.
S. H. K. Signal cabins to be built, and points and signals interlocked. This work entails widening Br. 135, and building new quarters to replace those pulled down or converted into offices.
T. H. to T. N. Widen the line and lay double track.
T. H. to P. T. H. Line to be diverted to a new route, passing nearer to Chin-Wang-Tao, and requiring a new junction in lieu of T. H., present station.
This new line is proposed, so as to do away with the present heavy grades between T. H. and P. T. H. Its worse grade will be 1 in 500 and much heavier trains than at present can then be handled.
S. H. K. to K. Y. Re-lay main line with 85 lb. rails in lieu of present 60 lbs.
S. M. to L. C. Reduce grade east of Lan-ho from 1 in 200 to 1 in 250.
K. P. Reconstruction of station yard to handle increasing coal traffic, and entailing building a new station building.
K. Y. Reconstruction of station yard to handle increasing coal traffic.

Level Crossings. Signalling and interlocking the more important crossings.

D. Poyntz Ricketts,

Engineer-in-Chief and General Manager.

TRAFFIC DEPARTMENT.

Train miles run for Revenue	
Train miles run for Construction and Maintenance	2,625,295
	57,467

Number of Passengers carried	
Number of Tons of Freight carried	3,696,889
	4,476,226

Passenger Mileage	
Ton Mileage	277,825,494
	372,540,618
Total "Passenger Ton" Mileage	650,366,112
Average number of men employed under Traffic Manager including Police Force	3,203

TELEGRAPH DEPARTMENT.

Length of Wires.

T. C.—T. C. Junction	Miles 16.65
C. M.—Y. K. Double wires	1043.50
T. S.—Fengtien Single wire	433.55
K. P. T.—Fengtien Double wires	214.50
T. S. City—Hsiku	4.00
T. S. City—T. S. E.	16.26
T. K.—H. H.	24.43
F. T.—Lookouchiao	3.85
	<u>Miles 1756.74</u>

Electric Staff Wires.

C. M.—Fengtien & Yingkow	Miles 521.75
Number of Messages sent, Service	190224
Number of Messages sent, Outside	4454
Average Number of Employes	394
Number of Telegraph Stations	81
Number of Telegraph Instruments in use	137
Number of Electric Staff Stations	73
Number of Electric Staff and Tablet Apparatus	141

圖 全 路 鐵 奉 京
P. M. R. AND CONNECTIONS.



圖全路鐵天奉至京北

SCALE { VERTICAL 200 FEET TO $\frac{1}{2}$ INCH
HORIZONTAL 1800000 18.94 MILES TO $\frac{1}{2}$ INCH

